REMARKS

By the present Amendment, claims 1-29 are canceled without prejudice and new claims 30-66 are added. Support for the new claims is found throughout the specification as filed, including the original claims. Exemplary support for the new claims can be found in the priority application, USSN 60/172,338, as indicated in the table below. The priority application is incorporated by reference in its entirety into the present application.

Claim(s)	Exemplary support in USSN 60/173,338
30	p. 5; p. 4, lines 5-7; p. 5, line 7-8
31, 49	p. 4, lines 12-13
32, 50	p. 5, line 8
33, 51	p. 5, lines 24-27
34, 52	p. 5, line 8
35, 53	p. 4, line 14
36, 54	p. 5, lines 6-7
37	p. 4, line 19-20
38	p. 3, lines 17-25
39	p. 25, lines 21-23
40, 59	p. 6, lines 9-10
41, 60	p. 1, p. 2, lines 18-20
42, 61	p. 8
43, 62	p. 6, lines 7-8
44, 63	p.4, line 32
45, 64	p.3, lines 23-25
46, 65	p. 25-26
47, 66	p. 15, lines -16-24
48, 58	p. 5; p. 4, lines 18-19; p. 5, line 7-8
55	p. 4, line 9-10
56	p. 21-22 (Fig. 2)
57	p. 14, lines 25-27

No new matter has been introduced. Applicants reserve the right to pursue the subject matter of the canceled claims in this or other applications. Outstanding rejections are addressed below.

35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 1-29 under 35 U.S.C. § 112, second paragraph, as allegedly vague and indefinite because the steps required for identification of an RNP complex were not expressly set out. Without conceding to the Examiner's position, Applicants note that this rejection does not apply to new claims 30-66 because the new claims recite the step of "identifying a plurality of mRNAs from the mRNP complex" rather than "identifying an RNP complex."

The Examiner has rejected claims 1-29 under 35 U.S.C. § 112, second paragraph, as allegedly unclear whether *any* one of the RNP complexes or *all* complexes in the sample are bound by a ligand and whether the phrase "a plurality of complexes" implies duplicates or multiple complexes of the same type or different types of complexes. Without conceding to the Examiner's position, Applicants note that new claims 30-66 no longer recite the phrase "identifying a plurality of RNP complexes," thus making this rejection moot.

The Examiner has rejected claims 1-29 under 35 U.S.C. § 112, second paragraph, as allegedly incomplete due to omitting "essential steps," including in particular, the step of processing a sample, such as cell lysis. Without conceding to the Examiner's position, Applicants note that this rejection is not applicable to the newly presented claims because the new claims recite the step of "lysing a cell comprising an endogenous mRNA complex" (e.g., claim 30) or "lysing the cell" (e.g., claim 48). Therefore, the rejection is no longer relevant.

Canceled claim 24, which contained the phase "said identifying step is carried out on a microarray," was deemed by the Examiner unclear. This rejection is no longer relevant because the analogous new claims (claims 34 and 52) require that mRNAs are identified using a microarray." Working examples of using microarrays for mRNA identification are described in the specification in detail, making the language of the claims sufficiently clear to a skilled artisan.

35 U.S.C. § 112, First Paragraph

The Examiner has rejected claims 1-29 under 35 U.S.C. §112, first paragraph, as allegedly non-enabled. In particular, according to the Examiner, "the ability to separate and

collect components. . . .would be highly unpredictable absent a step to liberate the components such as by cellular lysis." March 1, 2007, Office Action, at 8. Further, the Examiner opined that the claimed methods would be unpredictable for ligands that are not specific for either an RBP/RAP or mRNA, such as, e.g., nucleic acids. *Id.* at 9. Without conceding to the Examiner's position, Applicants note that the stated grounds of the rejection do not apply to new claims 30-66 for at least two reasons. First, the new claims explicitly recite the step of lysing cells. Second, the new claims recite contacting the mRNP complex with an *antibody* that specifically binds at least one component of the mRNP complex (claim 30) or with epitope-tagged RNA-binding *protein* (claim 48). Examples of using such antibodies and epitope-tagged proteins are described in the specification in detail. The specification in conjunction with the knowledge in the art is sufficient to enable a skilled artisan to practice the claimed invention.

35 U.S.C. § 102

The Examiner has rejected certain claims under 35 U.S.C. § 102 over certain references as follows:

1) Claims 1, 2, 8, 11, 17, 26 and 29 were rejected under 102(b) over *Allen*;
2) Claims 1, 2, 5-8, 12-17, 25 and 26 were rejected under 102(a) over *Antic*;
3) Claims 1, 2, 8, 12, 17, 26 and 27 were rejected under 102(a) over *Reim*;
4) Claims 1, 2, 6-9, 12, 17, 23, 26 and 28 were rejected under 102(b) over *Keene*;
5) Claims 1-6, 12, 17 and 26 were rejected under 102(b) over *Buckanovich*;
6) Claims 1, 2, 8, 10, 12, 18 and 26 were rejected under 102 (a) over *Takeda.*

Without conceding to the Examiner's position, Applicants note that the stated grounds of the rejection do not apply to new claims 30-66 at least because the cited references a) do not teach the step of "*identifying a plurality of mRNAs from the mRNP complex without amplifying the mRNAs by PCR, thereby to produce a gene expression profile comprising the identity of the mRNAs in the mRNP complex*" and/or b) are not prior art. Each reference is addressed below.

Allen relates to immunoprecipation of mitochondirial ribonucleoprotein complexes, however, it does not identify a gene expression profile but rather identifies only a single

mRNA (mRNA for A6), which was found to exist in "pre-edited," "partially edited" and "fully edited" forms (see *Allen*, Fig. 7 at p. 6021). Identification of a gene expression profiles requires identification of mRNAs for more than a single gene. For at least that reason, *Allen* does not anticipate claims 30-66.

Antic relates to immunoprecipation of NF-M:mRNA GFP-Hel-N1 complexes, however, the specific RNAs in these complexes were analyzed following amplification by RT-PCR (see *Antic*, p. 454, right col., 3rd paragraph). Because claims 30-66 recite "identifying a plurality of mRNAs. . . .*without amplifying the mRNAs by PCR*," these claims are not anticipated by *Antic* for at least that reason.

Reim was published on December 15, 1999 and, as evidenced by a Rule 1.131 declaration attached to this response, is not prior art under 37 U.S.C. § 102(a).

Keene relates to identification of mRNAs bound to Hel-N1 and Hel-N2, wherein mRNAs are reverse transcribed, "recovered" by PCR, "partitioned" (i.e., selected) with a 3' UTR binding protein, Hel-N1, and then "recycled" (i.e., iteratively selected) (see *Keene*, col. 28, lines 2-11, and Figure 12). Because claims 30-66 require "identifying a plurality of mRNAs. . . .*without amplifying the mRNAs by PCR*," claims 30-66 are not anticipated by *Keene* for at least that reason.

Buckanovich relates to immunoprecipatation of Nova-1 complexes, however, like in *Allen*, the associated mRNAs were identified following amplification by PCR (see *Buckanovich*, e.g., p. 3195, left col., 4th paragraph). Because claims 30-66 require "identifying a plurality of mRNAs. . . .*without amplifying the mRNAs by PCR*," claims 30-66 are not anticipated by *Buckanovich* for at least that reason.

Takeda was published on December 1, 1999 and, as evidenced by a Rule 1.131 declaration attached to this response, is not prior art under 37 U.S.C. § 102(a).

Thus, all new claims are novel over any one of *Allen, Antic, Reim, Keene, Buckanovich* or *Takeda.* Accordingly, the rejections under § 102 should be withdrawn.

Conclusion

Applicants request that the Examiner enter the proposed amendments, reconsider and withdraw outstanding rejections and allow all pending claims. The Examiner is invited to call the undersigned at (617) 937-2340 with any questions or concerns.

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Respectfully submitted,
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